

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (currently amended): A fan array fan section in an air-handling
2 system comprising:
3 (a) at least ~~three~~ six fan units;
4 (b) said at least ~~three~~ six fan units arranged in a fan array;
5 (c) an air-handling compartment within which said fan array of fan units
6 is positioned; and
7 (d) an array controller for controlling said at least ~~three~~ six fan units to
8 run at substantially peak efficiency by strategically turning selective
9 ones of said at least six fan units on and off.

10
1 Claim 2 (currently amended): The fan array fan section in an air-handling
2 system of claim 1, wherein said at least ~~three~~ six fan units are plenum fans.

3
1 Claim 3 (original): The fan array fan section in an air-handling system of
2 claim 1, wherein said air-handling compartment has an airway path, said airway path
3 being less than 72 inches.

4
1 Claim 4 (currently amended): The fan array fan section in an air-handling
2 system of claim 1, wherein said at least ~~three~~ six fan units are a plurality of fan units
3 arranged in a fan array configuration selected from the group consisting of:

- 4 (a) a true array configuration;
5 (b) a spaced pattern array configuration;

- (c) a checker board array configuration;
- (d) rows slightly offset array configuration;
- (e) columns slightly offset array configuration; and
- (f) a staggered array configuration.

Claim 5 (currently amended): The fan array fan section in an air-handling system of claim 1, wherein said at least ~~three~~ six fan units ~~[[are plenum fans]]~~ include at least two vertically arranged fan units.

Claim 6 (currently amended): The fan array fan section in an air-handling system of claim 1, wherein each of said at least ~~three~~ six fan units is positioned within a fan unit chamber.

Claim 7 (currently amended): The fan array fan section in an air-handling system of claim 1, wherein each of said at least ~~three~~ six fan units is suspended within a respective said fan unit chamber such that there is an air relief passage therebelow.

Claim 8 (currently amended): The fan array fan section in an air-handling system of claim 1, wherein each of said at least ~~three~~ six fan units is positioned within a fan unit chamber having at least one acoustically absorptive insulation surface.

Claim 9 (original): The fan array fan section in an air-handling system of claim 1, wherein each of said at least ~~three~~ six fan units are mounted in a grid system.

Claim 10 (original): The fan array fan section in an air-handling system of claim 1, wherein each of said at least ~~three~~ six fan units has a fan wheel diameter, wherein spacing between said at least ~~three~~ six fan units is less than 60% of said fan wheel diameter.

1 Claim 11 (currently amended): A fan array fan section in an air-handling
2 system comprising:

- 3 (a) an air-handling compartment;
4 (b) a plurality of fan units;
5 (c) said plurality of fan units arranged in a fan array;
6 (d) said fan array having at least one fan unit arranged vertically on at
7 least one other fan [[unit.]] unit;
8 (e) said fan array positioned within said air-handling compartment; and
9 (f) said air-handling compartment positionable within a structure such
10 that said air-handling system conditions the air of said structure.

11
1 Claim 12 (currently amended): The fan array fan section in an air-
2 handling system of claim 11 further comprising an array controller programmed to
3 operate said plurality of fan units at peak efficiency by strategically turning on and off
4 selective ones of said plurality of fan units.

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1 Claim 13 (original): The fan array fan section in an air-handling system of
2 claim 11, wherein said plurality of fan units are plenum fans.

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1 Claim 14 (original): The fan array fan section in an air-handling system of
2 claim 11, wherein said air-handling compartment has an airway path, said airway path
3 being less than 72 inches.

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1 Claim 15 (original): The fan array fan section in an air-handling system of
2 claim 11, wherein said plurality of fan units are arranged in a fan array configuration
3 selected from the group consisting of:

- 4 (a) a true array configuration;
5 (b) a spaced pattern array configuration;
6 (c) a checker board array configuration;

- (d) rows slightly offset array configuration;
- (e) columns slightly offset array configuration; and
- (f) a staggered array configuration.

Claim 16 (original): The fan array fan section in an air-handling system of claim 11, wherein each of said plurality of fan units is positioned within a fan unit chamber.

Claim 17 (currently amended): The fan array fan section in an air-handling system of claim 11, wherein each of said plurality of fan units is suspended within a respective said fan unit chamber such that there is an air relief passage therebelow.

Claim 18 (currently amended): The fan array fan section in an air-handling system of claim 11, wherein each of said plurality of fan units is positioned within a fan unit chamber having at least one acoustically absorptive insulation surface.

Claim 19 (original): The fan array fan section in an air-handling system of claim 11, wherein each of said plurality of fan units is mounted in a grid system.

Claim 20 (original): The fan array fan section in an air-handling system of claim 11, wherein each of said plurality of fan units has a fan wheel diameter, wherein spacing between said plurality of fan units is less than 60% of said fan wheel diameter.

Claim 21 (new): The fan array fan section in an air-handling system of claim 1, further comprising an array of backdraft dampeners, each backdraft dampener in line with a respective fan unit.

1 Claim 22 (new): The fan array fan section in an air-handling system of
2 claim 11, further comprising an array of backdraft dampeners, each backdraft dampener
3 in line with a respective fan unit.
4

1 Claim 23 (new): The fan array fan section in an air-handling system of
2 claim 1, wherein each fan unit has a peak efficiency operating range outside of which it
3 operates at a reduced efficiency, wherein said array controller is programmed to
4 operate said at least six fan units at substantially peak efficiency by strategically turning
5 off at least one fan unit operating at reduced efficiency and running the remaining fan
6 units within said peak efficiency operating range.
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1 Claim 24 (new): The fan array fan section in an air-handling system of
2 claim 11, further comprising an array controller, wherein each fan unit has a peak
3 efficiency operating range outside of which it operates at a reduced efficiency, wherein
4 said array controller is programmed to operate said plurality of fan units at substantially
5 peak efficiency by strategically turning off at least one fan unit operating at reduced
6 efficiency and running the remaining fan units within said peak efficiency operating
7 range.
8

1 Claim 25 (new): The fan array fan section in an air-handling system of
2 claim 1, said array controller is programmed to operate said at least six fan units at peak
3 efficiency for a performance level based on a criteria selected from the following group
4 of criteria:

- 5 (a) air volume;
- 6 (b) level of air flow;
- 7 (c) pattern of air flow; and
- 8 (d) number of fan units to operate.
- 9

1 Claim 26 (new): The fan array fan section in an air-handling system of
2 claim 11, further comprising an array controller for controlling said plurality of fan units
3 to run at substantially peak efficiency by strategically turning selective ones of said
4 plurality of fan units on and off, said array controller programmed to operate said
5 plurality of fan units at peak efficiency for a performance level based on a criteria
6 selected from the following group of criteria:

- 7 (a) air volume;
- 8 (b) level of air flow;
- 9 (c) pattern of air flow; and
- 10 (d) number of fan units to operate.

11
1 Claim 27 (new): The fan array fan section in an air-handling system of
2 claim 1, said array controller is programmed to operate said at least six fan units to
3 produce a stable operating point and eliminate the surge effects.
4

1 Claim 28 (new): The fan array fan section in an air-handling system of
2 claim 11, further comprising an array controller for controlling said plurality of fan units,
3 said array controller is programmed to operate said plurality of fan units to produce a
4 stable operating point and eliminate the surge effects.
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1 Claim 29 (new): The fan array fan section in an air-handling system of
2 claim 1, said array controller is programmed to selectively control the speed of each of
3 said at least six fan units to run at substantially peak efficiency.
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1 Claim 30 (new): The fan array fan section in an air-handling system of
2 claim 11, further comprising an array controller for controlling said plurality of fan units,
3 said array controller is programmed to selectively control the speed of each of said
4 plurality of fan units to run at substantially peak efficiency.
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1 Claim 31 (new): The fan array fan section in an air-handling system of
2 claim 1, said air-handling compartment positionable within a structure such that said air-
3 handling system conditions the air of said structure.

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